



Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, NM 87502-5469
Telephone (505) 827-2855
www.env.nm.gov



James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

Certified Mail - Return Receipt Requested

March 15, 2019

George Rawson
Sonoma Ranch East II
1274 Golf Club Road
Las Cruces, NM 88011

Re: Sonoma Ranch East II/Sonoma Ranch East Phase 9; CGP; SIC 1521; NPDES Compliance Evaluation Inspection; NPDES #NMR1000NV; February 13, 2019

Dear Mr. Rawson:

Enclosed please find a copy of the report and check list for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Introduction, detailed site observations, and findings noted during this inspection are discussed in the "NPDES Construction General Permit" section of the inspection report.

You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and advised to modify your operational and/or administrative procedures, as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see the address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

Robert Houston
US Environmental Protection Agency, Suite 1200
Enforcement Branch (6EN-WS)
1445 Ross Avenue
Dallas, Texas 75202-2733

Sarah Holcomb, Program Manager
New Mexico Environment Department
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

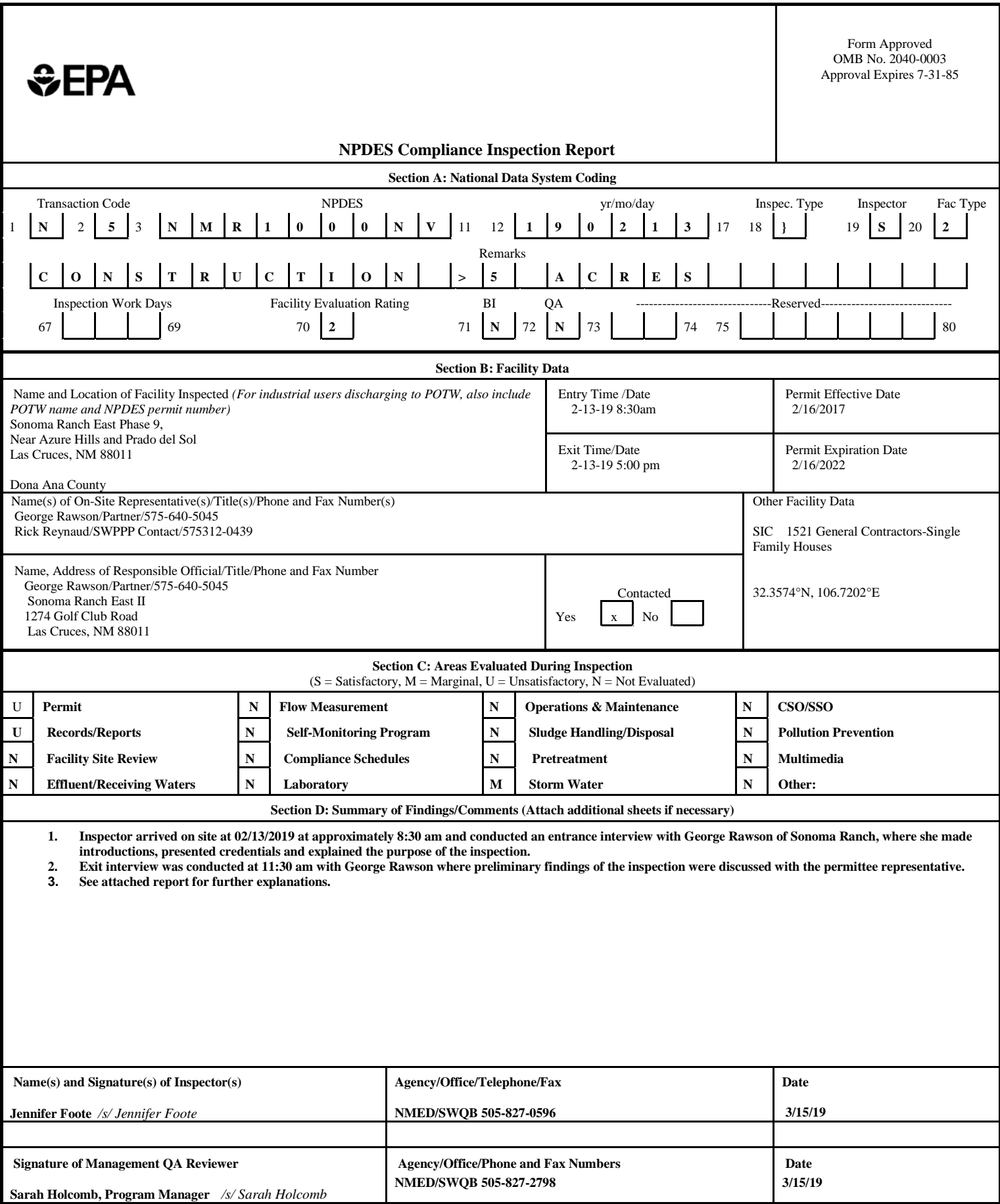
If you have any questions about this inspection report, please contact Jennifer Foote at (505)827-0596 or at Jennifer.Foote@state.nm.us.

Sincerely,

/s/ Sarah Holcomb

Sarah Holcomb
Program Manager
Point Source Regulation Section
Surface Water Quality Bureau
Surface Water Quality Bureau

Cc: Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
David Long, USEPA (6EN-WM) by e-mail
Amy Andrews, USEPA (6EN-WM) by e-mail
David Esparza, USEPA (6EN-WM) by e-mail
Robert Houston, USEPA (6EN-WS) by e-mail
Darlene Whitten-Hill, USEPA (6EN-WC) by e-mail
Nancy Williams, USEPA (6EN-WC) by e-mail
Mike Kesler, NMED District III by e-mail
Jakob Kidd, City of Las Cruces by email
George Rawson, Sonoma Ranch East II by email



NPDES Construction General Permit Inspection Report – State of New Mexico

Inspection Date	2/13/19	Entry Time Exit Time	8:30am 5:00pm
Inspector Name/ Telephone	Jennifer Foote 505-827-0596		
Facility Name/ Physical Location	Sonoma Ranch East Phase 9, Near Azure Hills and Prado del Sol Las Cruces, NM 88011		
Facility Type	<input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Municipal <input type="checkbox"/> Industrial		
County Location	Dona Ana County		
Latitude/Longitude (Decimal Degrees)	32.3574°N, 106.7202°E		

Operator/Mailing Address	Date Company Operation Began	Authorized Official(s)	Phone	NPDES Tracking Number	NOI Cert Date	SWPPP Cert Date
Sonoma Ranch East II 1274 Golf Club Road Las Cruces, NM 88011	9/24/2004	George Rawson	575-640-5045	NMR1000NV	7/25/ 2017	Undated but certified

Was project covered under a previous permit?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, previous NPDES Tracking Numbers:	
Actual Start Date	October 1, 2017 Estimated End Date October 2018
Disturbed Area	<input checked="" type="checkbox"/> >5 acre <input type="checkbox"/> 1>acre<5 <input type="checkbox"/> <1acre and part of larger common plan
Receiving Water, including information on segment number, impairments, tier	Las Cruces MS4, Rio Grande segment 20.6.4.101; TMDL for e. coli, Tier 2

Permittee Representatives Present During Inspection:			
Name	Company/Organization	Title	Telephone
George Rawson	Sonoma Ranch East II	Partner	575-640-5045
Rick Reynaud	Verde Environmental	SWPPP Contact	575-312-0439

Section I – Introduction:

The project is the construction of residential homes in Las Cruces NM with a 16 acre greater plan of development. There are multiple phases and builders in the general area. The western portion of this project is currently being built out as homesites, while the eastern part of the project is currently a stormwater management structure that will be developed for housing in Phase 10. The site drains to the north to Alameda Arroyo (identified as South Fork Las Cruces Arroyo in the SWPPP) which is a natural stormwater conveyance within the Las Cruces MS4. This inspection was in response to a complaint about poorly functioning BMPs.

Section II – Observations Summary:

Permit:

Sonoma Ranch LLC (NMR1000NV) and Caliper Construction (NMR1000NX) had obtained permit coverage for this Project under the 2017 CGP. The SWPPP prepared for the project area did not include information on how NPDES permit responsibility would be transferred to developers. Sonoma Ranch LLC submitted their NOT on 10/16/18 with the stated reason for termination of “Earth Disturbing Activities Complete, Part 8.2.1 requirements met.” Caliper Construction had issues with the electronic system and their NOT submittal was not completed until 2/26/19. The current developers had not submitted NOIs.

It was stated that eastern portion of the site and empty lots had been temporarily stabilized with tackifier, however, that does not meet the criteria for final stabilization.

The SWPPP stated that the National Register of Historic Places had been reviewed and it was determined no effect. SHPO was not consulted for concurrence.

SWPPP:

The SWPPP was certified by both operators, but there was no date for the signatures. Estimated dates for stabilization in the SWPPP only included the roadways. The plan stated that the project’s earth disturbances are not located within 50 feet of a surface water so buffer requirements do not apply. A copy of a nonjurisdictional determination for Alameda Arroyo was not included in the plan and was not found by the inspector at <https://watersgeo.epa.gov/cwa/CWA-JDs/>. The plan did not document that site specific practices will result in flow velocities that are not greater than predevelopment conditions.

Recordkeeping & Inspections:

There were no NOI postings onsite.

A copy of the Sonoma Ranch NOT was in the Plan. The Rainfall Log, Grading and Stabilization Log, and Training Logs had been maintained.

Inspections had been completed through 10/13/2018, when the NOT was submitted. Inspections had not been signed by all operators. There was no documentation of maintenance being performed.

BMPs/Implementation:

In general, the BMPs were limited to a 6 month tackifier application and a berm around the lot as perimeter control. It appeared that several berms were not adequate to contain flows off the site and had not been maintained after installation (photo 2, 3). The eastern portion of the site had no perimeter controls and sediment laden runoff could discharge to the road and the storm drainage system (photo 4). No BMPs were installed to prevent sediment from entering storm drains (photo 5,8). Rock had been installed at the end of culverts, but erosion was occurring adjacent to them indicating inadequate sizing and one had been overwhelmed by sediment (photo 7-11).

The Site map included a note that a co-polymer with 6 month treatment should be used on all disturbed surfaces. It also included a note that a native hydroseed mixture will be applied on all slopes. No information on date applied, type, amount, longevity of tackifiers used for temporary stabilization was included in the plan. It did not appear that slopes had been seeded (photo 7, 8, 10).

Section III – Inspection Findings:

Findings below are organized by permit section.

Part I: Permit Eligibility

Findings:

- Part 1.1.6 Historic Screening process in Appendix E was not followed.
- Part 1.5 SWPPP Public posting was missing.

Part 2: Design, Installation and Maintenance Requirements

Findings:

- Part 2.2.1 No documentation of buffers or equivalent controls
- Part 2.2.10 Storm drain inlets not installed and sediment accumulation in storm drains must be removed.
- Part 2.2.11 erosion controls and velocity dissipation devices for stormwater conveyance channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters is inadequate.
- Part 2.2.12 No documentation of sediment basin design was available.
- Part 2.2.14 No documentation of temporary stabilization of disturbed areas.
- Part 2.2.14. a.iii No dates for initiating and completing vegetative stabilization in the plan. Permanent stabilization of the site was not initiated and temporary non-vegetative stabilization measures were not documented.
- Part 2.2.14.b Final Stabilization criteria was not met for areas not covered by permanent structures.

Part 4: Site Inspection Requirements

Findings:

- Part 4.7.2. Inspections were not signed by all Operators

Part 7: Stormwater Pollution Prevention Plan (SWPPP)

Findings:

- Part 7.2.10 SWPPP Certification was not dated.

Part 8: How to Terminate Coverage

Findings:

- Part 8.2.1.a Site did not achieve final vegetative or non-vegetative stabilization

Part 9: Permit Conditions Applicable to Specific States, Indian Country Lands, Or Territories

Findings:

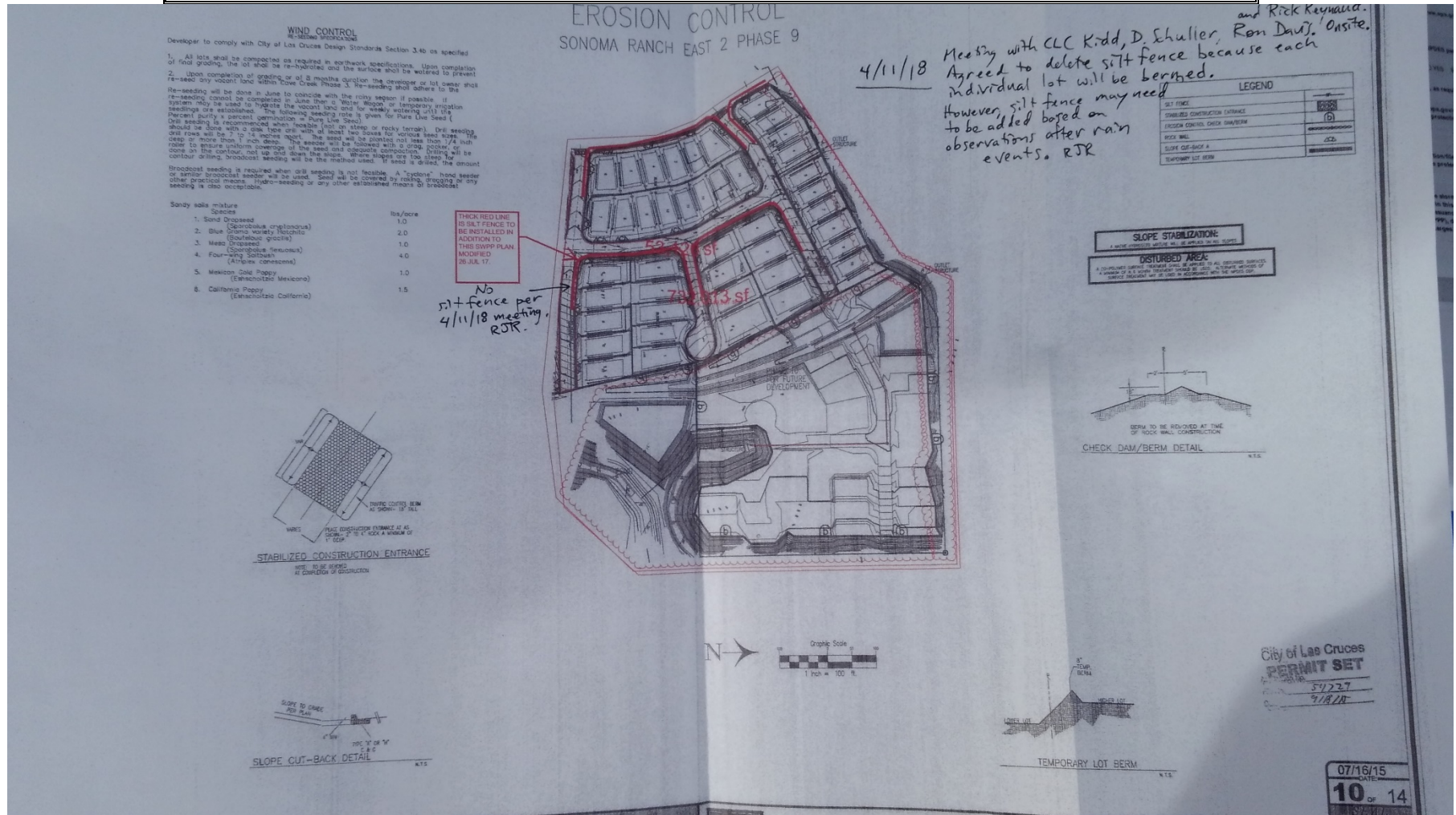
- Part 9.4.1.c SWPPP does not document that site specific practices will result in flow velocities that are not greater than predevelopment conditions

Section IV - List of Appendices:

Attachment 1: Photos

Attachment 2: City Punch List

NMED/SWQB Official Photograph Log Photo # 1		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 8:53am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Site Map		



NMED/SWQB Official Photograph Log Photo # 2		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 1:09 pm
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Berm on property edge with erosion		



NMED/SWQB Official Photograph Log Photo # 3		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 9:08 am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Berm on property edge with erosion		



NMED/SWQB Official Photograph Log Photo # 4		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 8:49am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: no perimeter BMPs between east area and stabilized road on west portion of site		



NMED/SWQB Official Photograph Log Photo # 5		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 1:03pm
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: no BMPs to prevent sediment from entering storm drain		



NMED/SWQB Official Photograph Log Photo #6		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 9:06am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Storm drain outlet with several inches of sediment inside		



NMED/SWQB Official Photograph Log Photo # 7		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 9:05am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Erosion adjacent to storm drain outlet, outlet stabilization is choked with sediment, no evidence of seeding on slopes		



NMED/SWQB Official Photograph Log Photo # 8		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 8:53am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Erosion adjacent to storm drain inlet, no inlet protection, no evidence of seeding on slopes		



NMED/SWQB Official Photograph Log Photo # 9		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 1:05pm
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Erosion around outlet protection		



NMED/SWQB Official Photograph Log Photo # 10		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 9:01am
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Erosion after outlet protection		



NMED/SWQB Official Photograph Log Photo # 11		
Photographer: Jennifer Foote	Date: 2/13/19	Time: 1:07pm
City/County: Las Cruces/ Dona Ana		State: New Mexico
Location: Sonoma Ranch Phase 9		
Subject: Erosion around outlet protection		



Attachment 2

Punch list

May 8, 2018

Fernando Reyes
Caliper Construction, Inc.
P.O. Box 1719, Las Cruces, NM 88004

Subject: Sonoma Ranch East II Phase 9 Subdivision, Permit No. 20170372
FINAL INSPECTION PUNCH LIST

Dear Mr. Reyes,

On April 23, 2018 a final inspection was conducted for the referenced subdivision. The following persons were in attendance:

Public Works: David Sedillo, Gabe Lara and James Moore
Community Development: Rocio Dominguez, Jacob Kidd
Utilities Department: Marco Chapa
Caliper Construction: Ron Davis, Fernando Reyes

The following items were identified during this inspection. Please review the following items and provide a schedule for undertaking the necessary remedial actions.

GENERAL:

1. Record drawings need to be submitted to my office for review and approval.
2. Materials List has already been submitted.
3. All applicable SWPPP measures need to be installed and functional. Also the slope protection along the arroyo, pond and inlet structure need to be installed per the subdivision's Erosion Control Plan (updated 7/26/17).
4. Ensure that all streets are swept and clean from debris.
5. Verify all lot elevations are to plan grade.

ROADWAY:

1. Sidewalk at 2625 Prado del Sol needs to be installed to the end of the new curb.
2. The Rip-Rap at the outlet structure near Petaluma rundown needs to be installed per plan.
3. General Note: ensure that all expansion joint material is trimmed flush with the concrete.
4. Grout gaps at the bottom the rock wall on the east side of Petaluma just north of Azure Hills.



5. Petaluma/Glenwood - The curb returns do not meet plan grade. Further, the north ADA ramp landing is not 4' wide (3'-10"). Because of these issues, the curb and ADA ramps need to be removed and installed per plan.
6. The following ADA landings are not 4-foot wide and will need to be removed and reconstructed: SE & SW Melrose/Petaluma (3'-11"), NE Melrose/Prado del Sol (3'-10") and SE Melrose/Prado del Sol (3'-11").
7. Glenwood Ct. - there are signs of tearing and segregation in the cul-de-sac. During the Warranty Inspection, we will review the condition of these areas. If these areas show premature deterioration, then the asphalt will need to be removed and replaced.
8. Petaluma/Glenwood Intersection - replace the failing asphalt patch.
9. Roadway General - there are oil spills in various locations on the asphalt. These areas will need to be addressed, whether by removing and replacing or by re-evaluating the condition during the warranty inspection.
10. Petaluma and Glenwood Ct. asphalt densities were less than 93%. Per the 2000 Road Standards, "Remove and replace or refund \$3.00/SY if the City Engineer feels the performance will be acceptable." The City is willing to accept the deduct for these roadways. As such, the road areas need to be mutually agreed upon, multiplied by \$3.00/SY and the total cost reimbursed to the City. Note, this does not alleviate the permittee from its responsibility to address any deficiencies in workmanship or material that may occur during the one-year warranty period.
11. Melrose - the roadway does not match plan grades at the east end. It either needs to be removed and replaced or addressed via the next phase (i.e. cut back far enough west from the current phase end point to where the roadway meets grade).

STORM DRAIN:

1. Ensure that the drop inlet is clean.
2. Paint the drop inlet nose.
3. Melrose/Petaluma - grout manhole.

STRIPING & SIGNAGE:

1. The new street name signs placed at Melrose/Prado del Sol and Petaluma/Melrose do not have the block numbers as shown on the plans.
2. The object markers placed at the east temporary turnaround on Melrose Road are not installed at minimum height and with the breakaway sleeve as noted in the end of road marker detail. Additionally, there were only three markers installed and the plans show four markers.

GAS:

1. Verify all "G" stamps are installed and in the correction location.
2. Redo the water valve asphalt patch on Melrose.
3. Mark a "G" stamp on the concrete cutoff wall at the east end of Melrose.

SEWER:

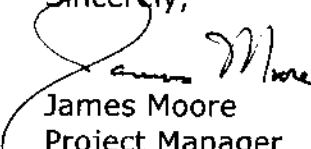
4. Glenwood/Petaluma – replace the storm drain lid with sewer lid.
5. Redo the water valve asphalt patch on Melrose.
6. Mark a "S" stamp on the concrete cutoff wall at the east end of Melrose.

WATER:

1. Verify all "W" stamps are installed and in the correct location.
2. Make sure the tracing wire is accessible/visible on each service.
3. Make sure all services are exposed and accessible.
4. Install blue fire hydrant reflectors.
5. Mark a "W" stamp on the concrete cutoff wall at the east end of Melrose.

Please coordinate the referenced work with the appropriate inspector. Thank you for your attention to this matter. If you have any questions or require additional information, please call me at (575) 528-3123.

Sincerely,



James Moore
Project Manager

JM/JM

pc: Jorge Garcia, Ph.D., P.E., Interim Public Works Director
David Sedillo, P.E., Contracts Administrator
Lee McGill, Roadway Inspector
Vince Castillo, Water/Wastewater Inspector
Gabe Lara, Gas Inspector
SooGyu Lee, P.E., Interim Street & Traffic Operations Administrator
Meei Montoya, P.E., Interim Wastewater Administrator
Lucio Garcia, P.E., Gas Administrator
Adrienne Widmer, P.E., Water Resources Administrator
Jacob Kidd, Environmental Compliance Officer

Attachment: Permittee Response

April 16, 2019

Robert Houston
US Environmental Protection Agency
Enforcement Branch (6EN-WS)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Sarah Holcomb, Program Manager
New Mexico Environment Department
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

RE: Sonoma Ranch East II/Sonoma Ranch East Phase 9; CGP; SIC 1521; NPDES Compliance Evaluation Inspection; NPDES #NMR1000NX; February 13, 2019

Dear Mr. Houston:

The purpose of this letter is to address all of the findings of the subject Compliance Evaluation Inspection. Concurrently, the Owners are initiating a jurisdictional determination (JD) for this subdivision. A previous nonjurisdictional determination for a subdivision along the same Arroyo expired in 2009. For this subdivision, a nonjurisdictional determination is anticipated from the Army Corps of Engineers.

We understand our responsibilities for proper site management and will continue to adhere to all applicable regulations and best management practices for this project.

The following is the list of the Inspection Findings followed by the Response:

Part 1: Permit Eligibility

- Part 1.1.6 Historic Screening process in Appendix E was not followed.
Response: The NM SHPO Office was contacted and the Review was received March 27, 2019. See attachment 1, SHPO review & Location Map.
- Part 1.5 SWPPP Public posting was missing.
Response: New NOI's were obtained and the Construction Site Notice Posted. See attachment 2, Photo Documentation, "SWPP Public posting" photo.

Part 2: Design, Installation and Maintenance Requirements

- Part 2.2.1 No documentation of buffers or equivalent controls
Response: Buffer berms will be installed on all required slopes facing the arroyo. Buffer berms are already in place at the northwest Hydroseeding location (March 17, 2019). Buffer Calculations & photos are included in attachment 3.
- Part 2.2.10 Storm drain inlets not installed and sediment accumulation in storm drains must be removed.
Response: Storm drain inlet protection was removed at the end of Phase 9 in October 2018. The Owner and City are addressing these concerns together to resolve this issue.
- Part 2.2.11 erosion controls and velocity dissipation devices for stormwater conveyance channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters is inadequate.

Response: A substantial velocity dissipation structure was installed at the north center Melrose Road outlet on March 03, 2019 in accordance with City of Las Cruces approved construction plans. See attachment 2 “Rock dissipation” photo. The two outlet velocity dissipation structures (riprap) 500’ to the east of this outlet were built to City of Las Cruces approved plans. The Owner and City are addressing these concerns together for a solution to the embankments at this location.

- Part 2.2.12 No documentation of sediment basin design was available.

Response: A portion of the Grading Plan is attached showing the east sediment basin dimensions and layout. The basin is designed to “corral” and pass-thru upslope stormwater while retaining only the silt. The basin is 159,970 cubic feet in volume in just the ultimate 100’ of the structure. See attachment 2, “Sediment basin parameters” photo.

- Part 2.2.14 No documentation of temporary stabilization of disturbed areas.

Response: To address this finding, the SWPP Plan and Inspections were re-started on March 03, 2019, see attachment 4, “Sonoma Ranch East II Phase 9 Re-opening of SWPP.”

- Part 2.2.14.iiiii No dates for initiating and completing vegetative stabilization in the plan. Permanent stabilization of the site was not initiated and temporary non-vegetative stabilization measures were not documented.

Response: To address this finding, the SWPP Plan and Inspections were re-started on March 03, 2019, see attachment 4, “Sonoma Ranch East II Phase 9 Re-opening of SWPP.”

- Part 2.2.14.b Final Stabilization criteria was not met for areas not covered by permanent structures.

Response: The SWPP Plan and Inspections were re-started on March 03, 2019, see attachment 4.

Part 4: Site Inspection Requirements

- Part 4.7.2. Inspections were not signed by all Operators

Response: All inspections are now signed by both operators, as will all future inspections. See attachment 2 “All Operators signatures” photo.

Part 7: Stormwater Pollution Prevention Plan (SWPPP)

- Part 7.2.10 SWPP Certification was not dated.

Response: Original Certification was researched and dated. See attachment 2 “SWPP Certification” photo.

Part 8: How to Terminate Coverage

- Part 8.2.1.a Site did not achieve final vegetative or non-vegetative stabilization

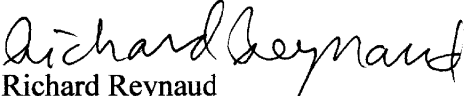
Response: To address this finding, the SWPP Plan and Inspections re-started on March 03, 2019, see attach. 4, “Sonoma Ranch East II Phase 9 Re-opening of SWPP.”

Part 9: Permit Conditions Applicable to Specific States, Indian Country Lands, ...

- Part 9.4.1.c SWPPP does not document that site-specific practices will result in flow velocities (and sediment yield) that are not greater than predevelopment conditions

Response: The flow velocities are greater after development because of the added impervious areas, but the **sediment yield** will be less due to these same impervious areas. See Table 1 (before/after sediment yield) contained in the Calculations Summary attachment 5.

2. Please refer questions regarding this response to Richard Reynaud, phone 575-312-0439 or e-mail rick@verde-environmental.com.


Richard Reynaud
Verde Environmental II, LLC
1615 S. Solano, Suite A
Las Cruces, NM 88001

Attachment 1 - SHPO review & Location Map.



Michelle Lujan
Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

March 27, 2019

Rick Reynaud
Verde Environmental II, LLC.
ray@verde-environmental.com
rick@verde-environmental.com

Re: Log 110136, SWPPP Plans for 2 subdivision projects near Las Cruces, NM (32.4013N, 106.7367W & 32.3571N, 106.7199W) Please Note that the second project listed is Sonoma Ranch Phase 9, RJR. Location map is attached.

Dear Mr. Reynaud:

I am writing in response to your email in which you requested information regarding historic properties that could be affected by the above referenced projects.

In order to assess the potential for the proposed SWPPPs to impact historic properties, I have reviewed our State Register of Cultural Properties, the National Register of Historic Places (NRHP), and our cultural resource records database. The first project area (32.4013N, 106.7367W) has not been subject to a previous cultural resource survey but our records indicate that there is one known historic property abutting, and possible extending into, the project area. The second project area (32.3571N, 106.7199W) has been partially surveyed and does not contain a known historic property.

Because only portions of the project areas have been surveyed and as a known historic property closely abuts, and may extend into, one of the project areas, there remains the potential to encounter unidentified cultural resources. If during construction activities relating to the proposed SWPPPs significant archaeological materials are encountered (i.e., ceramic sherds, lithic artifacts, bone, darkly stained sediment etc.), construction activity should be stopped and our office contacted.

We can be reached at (505) 827-6320, or, if you have any concerns or questions, please contact me by phone at (505)-452-6115 or e-mail me at richard.reycraft@state.nm.us.

Sincerely,
Richard Reycraft
Richard Reycraft
Archaeologist

General Location Map
SONOMA RANCH EAST II, Ph. 9
Las Cruces, Doña Ana County, New Mexico 88011
Coordinates at approx. center of subdivision (star):
32.3571°, -106.7199°



Attachment 2 - Photo Documentation

Attachment 2 – Photos - documentary

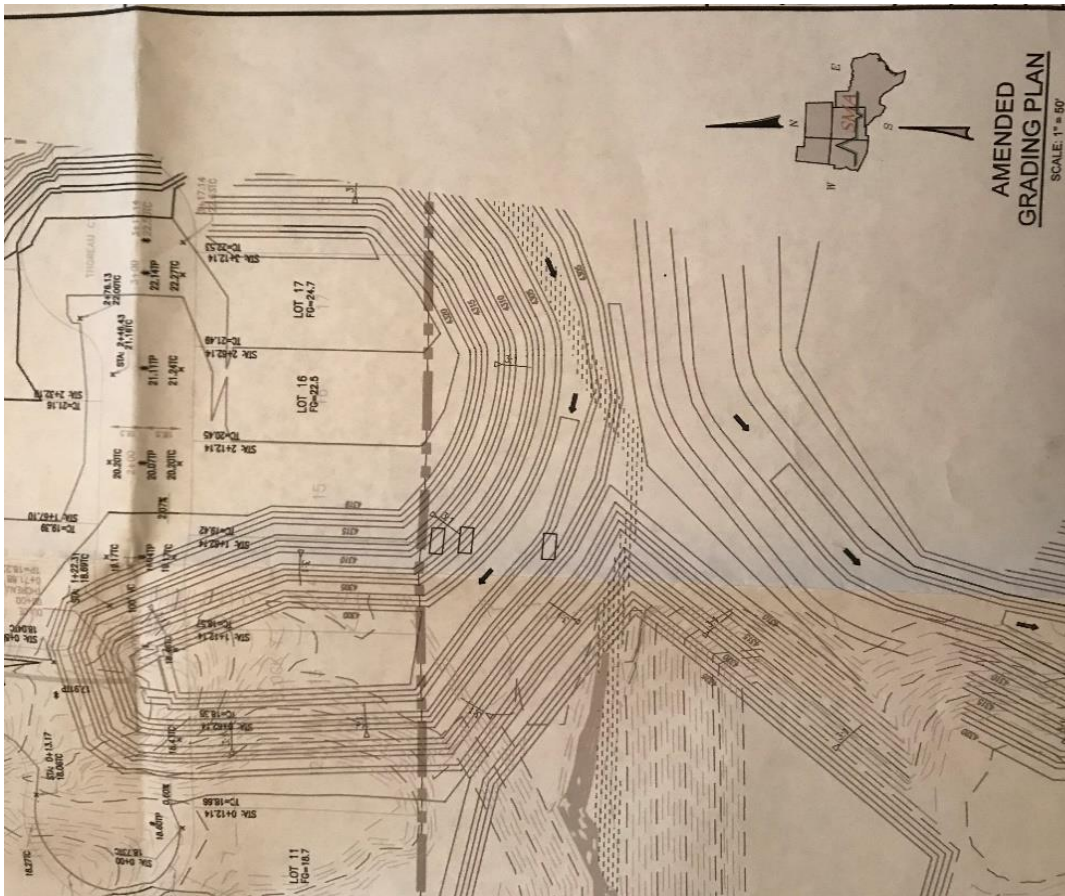
SWPPP Public posting (Part 1.1.6), Looking east from northwest corner



Rock velocity dissipation (Part 1.5) installed per City of Las Cruces approved plans, March 03, 2019. 15' width at outlet, 28' width at 15' distance from outlet. Boulders 2' to 3' size.



Sediment Basin excerpt from Civil Plans (Part 2.2.12). Basin is designed to pass-thru the upland stormwater and retain only the silt.



All Operators signatures on SWPP Inspections below (Part 4.7.2). These are the last 3 inspections from the original logbook, Sep/Oct 2018.

Signature: Richard Demand Date: Sep 21, 2018

SECTION 11: SWPP Inspection Certification & Signatures:
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person(s) who prepared the information and my review of the information submitted, I am satisfied that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Contractor/Subcontractor Certification & Signature (or "Duly Authorized Representative"):
Printed name: Gregory M. B. Date: 9-25-18
Signature: [Signature]

Permittee (Owner) Certification and Signature (or "Duly Authorized Representative"):
Printed name: Gregory B. Kauson Date: 9-25-18
Signature: [Signature]

2

Signature: Richard Demand Date: October 04, 2018

SECTION 11: SWPP Inspection Certification & Signatures:
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person(s) who prepared the information and my review of the information submitted, I am satisfied that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Contractor/Subcontractor Certification & Signature (or "Duly Authorized Representative"):
Printed name: Gregory M. B. Date: 10-5-18
Signature: [Signature]

Permittee (Owner) Certification and Signature (or "Duly Authorized Representative"):
Printed name: Gregory B. Kauson Date: 10-08-18
Signature: [Signature]

2

Signature: Richard Demand Date: October 13, 2018

SECTION 11: SWPP Inspection Certification & Signatures:
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person(s) who prepared the information and my review of the information submitted, I am satisfied that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Contractor/Subcontractor Certification & Signature (or "Duly Authorized Representative"):
Printed name: Gregory M. B. Date: 10-15-18
Signature: [Signature]

Permittee (Owner) Certification and Signature (or "Duly Authorized Representative"):
Printed name: Gregory B. Kauson Date: 10-15-18
Signature: [Signature]

SWPP Certification signed/dated all parties, July 2017 (Part 7.2.10)

SWPP Plan Sonoma Ranch East II Phase 9

16.0 SWPPP CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date: 7/25/17

Owner: Sonoma Ranch East II Phase 9

Print Name: George Rawson

Print Title: Managing Member

Signature: [Signature]

Operator: Caliper Construction

Print Name: Ron Davis

Print Title: President

Signature: [Signature]

17.0 POST-AUTHORIZATION ADDITIONS TO THE SWPPP
A copy of the NOI(s) and EPA Acknowledgment letter(s) are located in Attachment B of this Plan. A copy of the NPDES General Permit for Discharges from Construction Activities, latest revision, is included in Attachment B. The SWPP Plan will be kept onsite by the Superintendent where it will be made readily available at the time of an on-site inspection or request by EPA, NMED, or any other local agency.

18.0 REQUIRED SWPPP MODIFICATIONS
Part 7.4.1 of the CGP lists the conditions requiring SWPPP modification, including the site map(s). Required SWPPP modifications will be completed within 7 calendar days following the occurrence of the listed conditions. A record of SWPPP modifications will be maintained in Attachment E of this Plan, and will include the name of the person authorizing each change and brief summary of all changes. The modifications will be authorized by a person identified in Appendix I, Part 1.11.b of the CGP.

Professional Engineer Seal:
R. J. Reynard
RICHARD JAMES REYNARD
NEW MEXICO
12430
LICENSED PROFESSIONAL ENGINEER
31 Jul 17

Verde Environmental II, LLC 18 (575) 312-0439, Las Cruces, NM

Attachment 3 - Buffer Calculations

**BUFFER CALCULATIONS –
SONOMA RANCH EAST II PHASE 9 SUBDIVISION
NORTH EDGE NEAR ALAMEDA ARROYO**

April 11, 2019

Las Cruces, Doña Ana County, New Mexico

1. Rationale for Selecting Best Management Practices and Controls using RUSLE 2.0 Soil Loss Prediction Model Calculations

BUFFER DOCUMENTATION CALCULATIONS: Since this project is adjacent to the Alameda Arroyo, the requirements of CGP Part 2.2.1 apply to the construction activity.

The CGP, Appendix G, *Buffer Guidance* was used to determine the sediment controls necessary to ensure protection of the West Drain. In this case, the construction activity is located within 50 feet of the surface water and approximately 40 feet from the bank of the arroyo. The buffer width is determined to be 40 feet, and was relatively un-vegetated prior to construction.

Natural buffer retained: 40 feet.

Compliance Alternative Chosen (ref CGP Appendix G.2): Alternative #2 was chosen for this project and is described below:

2. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer (Part 2.1.2.1 a.ii);¹

The approximate 40 foot natural buffer will be retained and supplemented by additional erosion and sediment controls to achieve the sediment load reduction equivalent to a 50 foot natural buffer.

STEP 1 (Ref. Appendix G, EPA CGP): Determine the estimated 50-foot buffer sediment removal efficiency. Table G-10, lists the estimated 50-foot buffer performance in New Mexico. For the HD-Haplargids soil type at the site and low-density vegetation (southern mix prairie grass), the estimated sediment removal is 50%. Note that under Alternative 2 Requirements (Table G-7), double perimeter control is not required.

STEP 2: Select BMP that will achieve at least the level of sediment removal from Step 1 above. RUSLE 2.0 will be used to estimate sediment removal for two scenarios, earth berms (modelled as sandbags), and silt fence at down slope perimeters. As a conservative measure, no "credit" will be taken for the 40 foot of natural buffer, only the berm or the silt fence at the edge of the natural buffer.

**Table 1 - Buffer Calculations for Sonoma Ranch East II
Phase 9 Subdivision
using RUSLE 2.0 for North slope perimeter facing the Arroyo**

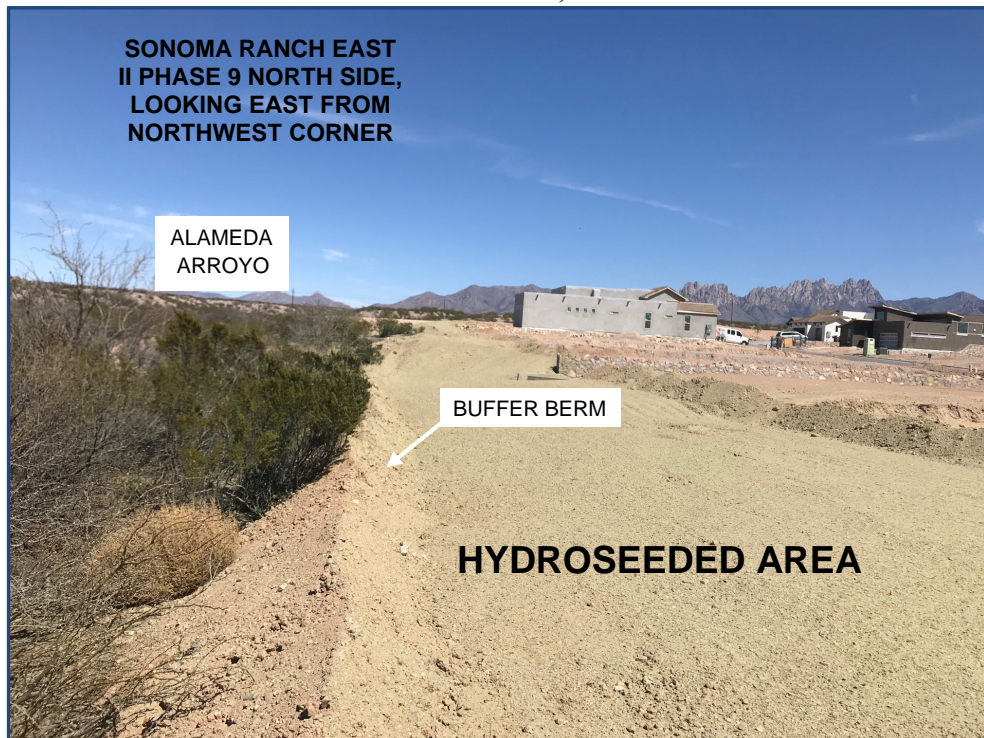
Proposed BMP for this Project	Percent Reduction Sediment Removal (t/a/y)			Comments
	Soil Loss	Sediment Delivery	Percent reduction	
Berm, earth modelled by sand bags	0.021	0.00151	92.8%	Would be installed at down slope northern boundary
Silt fence	0.020	0.00223	88.9%	Would be installed at down slope northern boundary

JUSTIFICATION AND RATIONALE FOR BMPs SELECTED: Both BMP scenarios achieve the required 50% sediment removal efficiency of the 50-foot natural buffer.

In this case, a **berm** will be used at the downslope boundary adjacent to the arroyo. The berm should perform well given the relatively flatness of the land. Also, the hydroseeding will provide soil loss protection that is not included in this calculation.

The photo below (taken March 23, 2019) documents the installation of the berm perimeter control that occurred after the NMED Compliance Inspection, as well as the hydroseeded area.

**BUFFER BERM INSTALLATION & HYDROSEED AREA
March 23, 2019**



RUSLE2 Profile Erosion Calculation Record

Info: Buffer calculation; sediment removal efficiency (for a silt fence) vs. a 50-foot natural buffer.

File: profiles\default profile Dona Ana

Inputs:

Location: USA\New Mexico\DonaAna County\NM_Dona Ana_R10
 Soil: nm690\HD Haplargids, dissected\Haplargids Loamy sand 80%
 Slope length (horiz): 50 ft
 Avg. slope steepness: 2.0 %

Management	Vegetation	Yield units	# yield units, #/ac

Contouring: default
 Strips/barriers: (none)
 Diversion/terrace, sediment basin: default
 Subsurface drainage: (none)
 Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr
 Soil loss erod. portion: 0.020 t/ac/yr
 Detachment on slope: 0.020 t/ac/yr
 Soil loss for cons. plan: 0.020 t/ac/yr
 Sediment delivery: 0.00223 t/ac/yr

Crit. slope length: -- ft
 Surf. cover after planting: -- %
 Avg. ann. total biomass removal: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
1/1/0	default		0
1/1/0	default		0
1/1/0	Install Silt Fence		0

RUSLE2 Profile Erosion Calculation Record

Info: Buffer calculation; sediment removal efficiency for an earth berm (modelled by sand bag berm) vs. a 50-foot natural buffer.

File: profiles\default profile Dona Ana

Inputs:

Location: USA\New Mexico\DonaAna County\NM_Dona Ana_R10
 Soil: nm690\HD Haplargids, dissected\Haplargids Loamy sand 80%
 Slope length (horiz): 50 ft
 Avg. slope steepness: 2.0 %

Management	Vegetation	Yield units	# yield units, #/ac

Contouring: default
 Strips/barriers: (none)
 Diversion/terrace, sediment basin: default
 Subsurface drainage: (none)
 Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr
 Soil loss erod. portion: 0.021 t/ac/yr
 Detachment on slope: 0.020 t/ac/yr
 Soil loss for cons. plan: 0.020 t/ac/yr
 Sediment delivery: 0.00151 t/ac/yr

Crit. slope length: -- ft
 Surf. cover after planting: -- %
 Avg. ann. total biomass removal: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
1/1/0	default		0
1/1/0	default		0
1/1/0	Install Sand Bag Berm		0

Attachment 4 - Sonoma Ranch East II Phase 9 Re-opening of SWPP

**Sonoma Ranch East II Phase 9 Re-opening of SWPP
for Stabilization of North Slopes**

1. The existing subject SWPP has been re-opened to monitor the stabilization of the north slopes of the subdivision facing the arroyo. The project had been terminated in October 2018. New NOI's were obtained for the Owner and Contactor and bi-weekly SWPP Inspections were restarted on March 3, 2019 to monitor the stabilization of the slopes.
2. The plan is for the north slope area (0.64 acres) to be hydroseeded and monitored until growth is 70% of similar terrain in the same vicinity. **Hydroseeding was accomplished on Saturday March 23, 2019. See details below in 3.** Other areas are under assessment for seeding.
3. Hydroseeding summary: Hydroseed was applied on March 23, 2019 by Caldon Seeding & Reclamation. The amt. of seed actually applied was 13.07 lbs Pure Live Seed (PLS) to 0.64 acre. The Materials list follows:
Seed: Arid area Blend Mix No. 194730 for Caliper Construction, iaw State and Federal noxious weed laws, source Granite Seed & Erosion Control – Denver, CO. Seed rate is 19.8 PLS lb/acre. **Mulch** rate was 2000 lb/acre, total 1280 lb utilized for 0.64 acre.
Tackifier rate was 200 lb/acre, total lot 128 lb utilized for 0.64 acre.
Area of hydroseeded coverage: 697' length x 40' width = 27,878 sq. ft. or 0.64 acre
The seed tag is attached to the end of this document.
4. Other actions performed in the north slope area include (thru April 10, 2019):
 - a. Regrading of Culvert structure outlet (facing the arroyo) off Melrose Place and regrading of the surrounding area leading to the arroyo.
 - b. Installation of Velocity Dissipation Device. Boulders 2' to 3' in diameter installed at outlet of large culvert off Melrose Place.
 - c. Berms formed on the north facing residential lots to prevent stormwater from escaping to the north. Berms were also established around the approx. 0.64 acre hydroseed area.
5. Monitoring: This north slope area will be monitored by SWPP Inspection reports every 2 weeks and after rainfall events of 0.25" or more.
6. Termination of Project: Inspections will continue until the seeded area attains 70% of background vegetation of similar terrain in the same vicinity.
7. For further information please contact Rick Reynaud at 575-312-0439 or rick@verde-environmental.com.

Seed Tag, 23 Mar 19, applied by Caldon Seeding, seeds from GraniteSeed – Denver.
Granite Seed is on the NM DoT Approved Product List (APL) supplier.

Granite Seed - Denver
From: 490 East 76th Ave., Unit A
Denver, CO 80229
Mix Name: Caliper- Las Cruces
Mix #: 194730
3-39907
Caliper- Las Cruces

Common Name	Variety	G + D or H	Origin
DECATS GRAMA	Vaughn	97 + 0 + 97	TX
STICALE	Quigley	98 + 0 + 98	WA
AN RICEGRASS	Netzer	91 + 7Z	MT
LOWER YELLOW PRAIRIE	Schuster	58 + 20 + 12	WA
WHEEL	VNS	79 + 7Z	MEX
COCKS' FOOT PLAIN	VNS	68 + 18 + 68	OK
ADAM SAGATON	VNS	96 + 7Z	OK
SANDCROPSEED	VNS	4 + 92 + 98	CO
FLOWER PURPLE PRAIRIE	Starbuck	79 + 7Z	WA

Date Tested: 24-Apr-18
Hard Seed: 7.22
Noxious Weed: NONE FOUND

Net Weight: 13.07 Lbs. PLS
Coverage: 0.660 Acre

NOTES TO BUYER: LIMITATIONS OF WARRANTIES AND REMEDIES

Seed color and quality are dependant upon many factors beyond the control of the labeled seller and NO WARRANTY is made for color, size and quality. The labeled seller warrants that all seed sold has been tested as required under applicable state and federal seed law and that the seed conforms to the label description, within recognized tolerances. THIS WARRANTY IS IN FULL OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE LABEL.

No claim shall be asserted against the labeled seller unless Buyer reports to the labeled seller within a reasonable period after discovery (but to exceed thirty days), any condition that might lead to a complaint. BUYER'S EXCLUSIVE REMEDY FOR ANY CLAIM OR LOSS RESULTING FROM BREACH OF WARRANTY, BREACH OF CONTRACT OR NEGLIGENCE (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES) SHALL BE LIMITED TO REFUND OF THE PURCHASE PRICE.

By acceptance of the seed, Buyer agrees the terms and conditions stated above are a benefit to the bargain and constitute the entire agreement between Buyer and the labeled seller. Buyer shall return the original unopened seed package to the labeled seller within twenty days of receipt for a refund of the purchase price if not accepted under these terms.

NOTICE: REQUIRED ARBITRATION / CONCILIATION / MEDIATION

The seed laws of several states including Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Minnesota, Mississippi, Missouri, North Dakota, South Carolina (Section 46-21-260), South Dakota, Texas and Washington require arbitration or mediation of disputes involving alleged defective seed before certain legal actions may be maintained against a seller. North Carolina law is an alternative to court action that allows claims to be investigated and heard before the Special Seed Board. A complaint against a seed seller in AR, CO, FL, IL, IN, MN, MS, MT, NC, SD, TX, WA, signed only, CA, GA, ID, ND, SD) must be filed with the Department of Agriculture or Seed Commissioner (N) or State Plant Board (AR) or Commissioner of Agriculture (NC) within sixty days to permit an inspection of seed, crops or plants (by an Arbitration Committee - AR, ID, MS, SD). In NC, failure to follow this procedure will limit the amount of damages recoverable. Certified copy of complaint must be sent by registered mail to the labeled seller as provided in individual state law. Information about these requirements may be obtained from the state Department of Agriculture.

Caldon Seeding & Reclamation
120 Hwy 66 East
Highway 333 & Paz Road
Albuquerque, NM 87123

Attachment 5 - Calculations Summary

SUMMARY OF ENGINEERING CALCULATIONS

Sonoma Ranch East II Phase 9

Subdivision northeast of Azure Hills Drive
and Prado Del Sol Avenue
Las Cruces, Doña Ana County,
New Mexico 88011

1. Rationale for Selecting Best Management Practices and Controls using RUSLE 2.0 Soil Loss Prediction Model Calculations

DISCUSSION/BACKGROUND: This project is to construct Phase 9 of the Sonoma Ranch East II Subdivision on Purple Sage Drive, northeast of Azure Hills Drive and Prado Del Sol Avenue within the city of Las Cruces, NM. The parcel has previously been partially cleared and graded.

Utility infrastructure that includes water, wastewater, stormwater, gas and electric will be provided for the subdivision. Project activities including clearing, grading, excavation, installation of utilities, installation of ponds and storm drain system. The project will conclude with new curbs, gutters, sidewalks, installation of base course and asphalt roadway.

The following calculations were performed using RUSLE 2.0 based on site conditions:

- Before construction: using native conditions including soil type HD, Haplargids, rainfall of 10-inches per year, slope of 5 percent, and overland flow path of 150 ft.
- Two BMP scenarios will be modeled during construction: (1) silt fence, and (2) Perimeter berms around the levelled 1% lots.
- After construction - Hard surfaced roads will be in place with storm water drainage directed to the Alameda Arroyo. Individual lots will be bermed until rock walls (and home construction) are built. Silt fence to be removed as blocks of homes are built upstream.

Table 1 - Soil Loss from Phase 9 using RUSLE 2.0

Proposed BMP for this Project	Soil Loss in tons per acre per year (t/a/y)			Comments
	Before Const.	During Const.	After Const.	
Before Development	1.20	-	-	Soil loss from current condition
Silt fence	-	0.019	-	Would be placed at down slope boundaries indicated on drawing
Individual lots graded, install perimeter berm	-	0.0038	-	Each lot graded to 1% and perimeter bermed

Proposed BMP for this Project	Soil Loss in tons per acre per year (t/a/y)			Comments
	Before Const.	During Const.	After Const.	
After Construction	-	-	0.020	roadways installed, individual lots bermed

RATIONALE: For this project, use of silt fencing installed as soon as possible after initial grading as shown on Site Map, will be the primary storm water and sediment loss control. Augmenting the fence, soil erosion berms will be installed around the lot perimeters to contain stormwater flow.

The calculations show that soil loss from during and after construction is less than before development conditions for both BMP scenarios.

2. Coefficient of Run-Off Summary. The run-off coefficients were determined using the methodology contained in the "Caltrans Storm Water Quality Handbooks, SWPPP/WPCP Preparation Manual" dated February 1, 2003. See attached printout for details and Attachment D for Figure 819.2A, *Runoff Coefficients for Undeveloped Areas*, and Figure 819.2B, *Runoff Coefficients for Developed Areas*.

Prior to Construction, **c=0.35**

After Construction, **c=0.53**

3. Runoff Discharge (Flow Velocity) Calculation
Paragraph 9.4.1.1 of the EPA Construction General Permit, NMR100000: *State of New Mexico, except Indian country*, states that controls be designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4 NMAC, including the anti-degradation policy, or waste load allocations (WLAs) are met.

This requirement applies to discharges both during construction and after construction operations have been completed.

Runoff Velocity (Q) was calculated using rainfall intensity data obtained from the NOAA Atlas 14 for the latitude/longitude of interest at [http://hdsc.nws.noaa.gov/hdsc/pfds/sa/nm_pfds.html], and the run-off coefficients calculated above in Section 2, Coefficient of Run-Off Summary. See attached printout for details.

Q = 15.356 cfs (before construction)

Q = 23.370 cfs (after construction)

There will be an increase in flow velocity due to the additional impervious areas installed. The control for the increase is the storm drain system collecting street stormwater and directing it into the Alameda arroyo.

4. Required Retention Volume (Paragraph 2.1.3.2.a.i. EPA CGP) **Note:** This section not needed since there is no stormwater retained by the subdivision.
5. Best Management Practices – Design and Construction Specifications, Maintenance Schedules, Criteria for Inspections and Expected Performance and Longevity.

Note that for this project, sediment ponding and berms about the roadway are recommended. Berms will also be used to divert stormwater to the ponds.

Table of BMPs, Specifications, Maintenance, Inspection Criteria and Expected Performance and Longevity

Type of BMP	Design and Construction Specifications	Maintenance Schedules	Criteria for Inspections	Expected Performance and Longevity
Silt Fence without Backing	See site map and Attachment A for specifications	As needed per inspection	Visual insp. – silt must be removed when it is higher than 50% of the height of the silt fence.	Dependent on installation and time of year. Properly installed & maintained, can last up to 1-6 months
Silt Fence with Supporting Wire Mesh	See site map and Attachment A for specifications	As needed per inspection	Visual inspection – silt must be removed when > 50% of the height of the silt fence.	Dependent on installation and time of year. Properly installed and maintained, can last up to 6-12 months
Soil Erosion Berm	See Attachment A for specifications	As needed per visual inspection	Must be regraded if silt & sediments are greater than 50% of the berm height or if berm itself is degrading.	Dependent on installation & time of year. Most likely need re-grooming every 1-2 months.
Sediment Pond	See site map and construction drawings and specifications	As needed per inspection	Visual inspection - Remove deposited silt when 50% volume is reduced	Dependent on rainfall events, can last up to 6 months to 2 years.

Type of BMP	Design and Construction Specifications	Maintenance Schedules	Criteria for Inspections	Expected Performance and Longevity
Filter Socks and Straw Wattles	Installed per manufacturer's recommendations	As needed per inspection	Visual inspection – replace if exterior covering is compromised.	Dependent on rainfall and exterior factors such as vehicle damage. Can last up to 3-9 months.
Filter fabric/silt fence for drop inlet protection	Installed per manufacturer's specs and approved construction drawings	As needed per inspection	Visual inspection – remove sediments when noted, replace if damaged.	Dependent on rainfall events and exterior factors such as vehicle damage. Can last up to 3-9 months.